

## ABSTRACT

A method, a system, and a computer program product for organizing a set of nodes into a minimum number of connected clusters of bounded size in a wireless transmission system is disclosed. The method comprising steps of; using of bits in packets used in the  
5 initial stages of the device discovery procedure, to include information relating to a state of said nodes during the initial stages of the procedure; setting parameters in the procedure for device discovery to achieve the said separation of the nodes into those in said transmit-state and said receive-state; defining a Master-designate among said nodes through a statistical  
10 procedure and defining remaining nodes as a Slave-designate; defining a cluster including said Master-designate and at least one said Slave-designate, wherein said Slave-designate continuously scans for said inquiry message transmitted from said Master-designate and said Slave-designate transmits said inquiry response to said Master-designate.